

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 7 (Cancelled).

8. (New) A sensor arrangement, comprising:

a semiconductor chip having a first surface, which has a media-sensitive region and at least one, first, electrical contact surface;

a support having a second surface, which faces said first surface of said semiconductor chip, has an opening, which at least overlaps with said media-sensitive region, and at least one, second, electrical contact surface, which at least overlaps with said at least one, first, electrical contact surface; and

an anisotropic conductor, which is arranged between said support and said semiconductor chip and produces an electrically conducting connection between said at least one, first, contact surface and said at least one, second, contact surface, and which has a traversing opening, which at least overlaps with the opening in said second surface, so that said media-sensitive region of said semiconductor opening is contactable through said opening with an analyte, wherein:

said anisotropic conductor seals the region outside of said opening against contamination with the analyte.

9. (New) The sensor arrangement as claimed in claim 8, wherein:
said anisotropic conductor is elastic.

10. (New) The sensor arrangement as claimed in claim 9, wherein:
said elastic, anisotropic conductor comprises an elastic, insulating, organic layer with embedded, conductive particles, grains or filaments.

11. (New) The sensor arrangement as claimed in claim 10, wherein:
said elastic, anisotropic conductor comprises a silicone layer with embedded gold filaments, which extend perpendicular to the plane of the silicone layer.

12. (New) The sensor arrangement as claimed in claim 10, wherein:
said organic, elastic layer includes embedded, metal grains in the relaxed state in a concentration such that the number of electrical contacts between the grains is insufficient to produce a continuous electrical conductivity;

by clamping of said elastic layer as a sealing element between said support and said semiconductor chip, said elastic layer is compressed to a degree such that, in the direction of compression, a sufficient number of electrical contacts is present for producing a conducting connection between said at least one, first, contact surface and said at least one, second, contact surface.

13. (New) The sensor arrangement as claimed in claim 8, wherein:
said semiconductor chip has an ion-sensitive region.

14. (New) The sensor arrangement as claimed in claim 8, wherein:
said semiconductor chip is a pH sensor element or a redox sensor element.